

Abstract

- Title:** The Comparison of Muscle Timing of Chosen Shoulder Girdle Muscles During Breaststroke Inside and Outside the Water
- Objectives:** The aim of this thesis was to compare timing and activation of chosen shoulder girdle muscles during breaststroke in the pool with counterflow and during exercise with rubber expander.
- Methods:** It was analyzed timing and level of muscle activation during swimming and simulating the same movement of upper extremities in the air against the power of rubber expander. As an objetification was used surface electromyography. One profesional swimmer took part in this experiment
- Results:** Based on results it seemed that the movement of upper extremities are different in the pool and in the air during swimming stroke of breaststroke. Most of the measurement were different in the pool and in the air.
- Keywords:** swimming, breaststroke, EMG, WaS-EMG, electromyography, shoulder girdle muscles, timing